

## **REMARKS**

Claims 1, 22 and 36 have been amended and claims 14, 31 and 51 have been canceled. Claim 1 to 13, 15 to 30, 32, to 50 and 52 to 56 remain active in this application.

1, 2, 3, 7 to 12, 14 to 19, 21, 22, 24 to 29, 31 to 33, 35 to 49, 51 to 54 and 56 were rejected as being anticipated by Ylitalo et al. (U.S. 6,788,661). The rejection is respectfully traversed.

Each of claim 1, 22 and 36, all of the independent claims from which the remaining claims depend, requires the contents of prior claims 14, 31, and 51 and are therefore claims 14, 31 and 51 as previously presented without amendment. These claims require that the first downlink transmission beam be associated with a first uplink multipath/ from a plurality of uplink multipaths associated with a first user, the second downlink transmission beam be associated with a second uplink multipath from the plurality of uplink multipaths, the first uplink multipath and the second uplink multipath being no less optimal than the remaining uplink multipaths from the plurality of uplink multipaths. No such feature is taught or suggested by Ylitalo et al.

As stated in the paragraph bridging pages 8 and 10 of the specification, directed diversity transmission allows the exploitation of the long-term reciprocity of the multipath channel. For example, the beams that contain the strongest multipath components on the uplink can be used for downlink transmission. More specifically, the beam that contained the strongest multipath component on the uplink can be used on the downlink to carry a first diversity signal. The beam that contained the second strongest signal on the uplink can be used on the downlink to carry a second diversity signal. The

first and second diversity signals can be generated by diversity coder 460. In one embodiment, the first and second diversity signals can be transmitted with the same power. In other embodiments, however, other power distributions are possible. For instance, it may be beneficial to match the transmit powers to the receive powers. In general, by transmitting two diversity signals using two orthogonally polarized beams, the user terminal is provided with at least two substantially uncorrelated signals.

Claims 3, 4, 7 to 12, 14 to 19, 21, 24 to 29, 31 to 33, 35, 37 to 49, 51 to 54 and 56 define patentably over Ylitalo et al. for at least the reasons presented above with reference to the claims from which they depend as well as reasons previously presented.

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo et al. in view of Ionescu (U.S. 6,603,809). The rejection is respectfully traversed.

Claim 2 depends from claim 1 and therefore defines patentably over the applied references since Ionescu does not overcome the deficiencies in Ylitalo et al. as previously noted hereinabove.

Claims 5, 6, 13, 23 and 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ylitalo et al. in view of Dajer et al. (U.S. 6,539,209). The rejection is respectfully traversed.

Claims 5, 6 and 13 depend from claim 1 and claims 22 and 30 depend from claim 22 and accordingly define patentably over the applied references for at least the reasons presented above with reference to the claims from which they depend since Dajer et al. fails to overcome the deficiencies in Ylitalo et al. as demonstrated above.

Claims 20, 34, 50 and 56 were rejected under 35 U.S.C.103(a) as being unpatentable over Ylitalo et al. in view of Dajer et al. further in view of Thibault et al. (U.S. 6,240,096). The rejection is respectfully traversed.

Claim 20 depends from clai 1, claim 34 depends from claim 22 and claims 50 and 56 depend from claim 35 and accordingly define patentably over the applied references for at least the reasons presented above with reference to the claims from which they depend since both Dajer et al. and Thibault et al. fail to overcome the deficiencies in Ylitalo et al. as demonstrated above.

In view of the above remarks and the fact that all claims as written have been indicated to be allowable, favorable reconsideration and allowance are respectfully requested.

Respectfully submitted,



Jay M. Cantor  
Attorney for Applicant(s)  
Reg. No. 19,906  
Texas Instruments Incorporated  
P. O. Box 655474, MS 3999  
Dallas, Texas 75265  
(301) 424-0355 (Phone)  
(972) 917-5293 (Phone)  
(972) 917-4418 (Fax)